

Amendments to the Claims:

Please cancel claims 2 as follows.

This listing of claims replaces all prior versions, and listings, of claims in the application.

Listing of claims:

1. (Currently Amended) A method of cleaning a substrate comprising:
applying an aqueous sulfuric acid solution diluted by ~~only~~ deionized water onto
the substrate having at least one of a metal wiring and a metal film formed thereon; and
cleaning contaminants existing on the substrate in accordance with a reaction
between the diluted aqueous sulfuric acid solution with the contaminants by applying a
mega-sonic energy to the substrate [[with]]including the applied diluted aqueous sulfuric
acid solution while reducing damage to the substrate and preventing corrosion of the at
least one of the metal wiring and the metal film.

2. (Cancelled)

3. (Original) The method of claim 1, wherein the diluted aqueous sulfuric
acid solution comprises the deionized water and sulfuric acid by a volume ratio of about
500: 1 to about 8,000: 1.

4. (Original) The method of claim 3, wherein the sulfuric acid has a
concentration of about 10 ppm to about 1,000 ppm.

5. (Original) The method of claim 1, wherein the mega-sonic energy is
generated using a power of about 5 Watts to about 15 Watts.

6. (Original) The method of claim 1, wherein cleaning the contaminants is
performed for about 30 seconds to about 120 seconds.

7. (Original) The method of claim 6, wherein cleaning the contaminants is performed at a temperature of about 20 degrees C to about 30 degrees C.

8. (Previously Presented) The method of claim 1, wherein the method further comprises providing the substrate into a spin scrubber.

9. (Original) The method of claim 8, wherein the substrate is provided into the spin scrubber in a batch type, the diluted aqueous sulfuric solution is applied by a spray process, and the mega-sonic energy is applied through a bar facing the substrate.

10. (Original) The method of claim 8, wherein the substrate rotates at a speed of about 8 rpm to about 50 rpm.

11. (Original) The method of claim 1, further comprising rinsing the substrate using deionized water, and drying the substrate.

12. (Currently Amended) A method of cleaning a substrate comprising:
providing an aqueous sulfuric acid solution diluted by ~~only~~ deionized water in a bath;

immersing the substrate having at least one of a metal wiring and a metal film into the diluted aqueous sulfuric acid solution; and

cleaning contaminants existing on the substrate in accordance with a reaction between the diluted aqueous sulfuric acid solution and the contaminants by applying a mega-sonic energy to the substrate ~~immersed in~~ including the diluted aqueous sulfuric acid solution while reducing damage to the substrate and preventing corrosion of the at least one of the metal wiring and the metal film.

13. (Original) The method of claim 12, wherein the diluted aqueous sulfuric acid solution comprises the deionized water and sulfuric acid by a volume ratio of about 500: 1 to about 8,000: 1.

14. (Original) The method of claim 12, wherein the sulfuric acid has a concentration of about 10 ppm to about 1,000 ppm.